

California Air Resources Board
Research Division

**Innovative Clean Air Technologies
2003 Grant Program**

INSTRUCTIONS FOR FULL PROPOSALS

August 2002

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The following elements are in separate downloadable documents.

Appendices

- I. Standard Grant Agreement
- II. Guidelines for Final ICAT Reports
- III. ARB's Treatment of Confidential Information

Forms

- 1 -- Statement of Intent & Abstract
- 2 -- Financial Information
- 3 -- Budget Tables (with Instructions)
- 4 -- Project Contributions and Level of Effort
- 5 -- Partners' In-Kind Contributions
- 6 -- Confidentiality Provision

INTRODUCTION

The Innovative Clean Air Technologies (ICAT) program of the California Air Resources Board (ARB) provides grants to help innovative technologies related to air quality move toward commercial application. ICAT supports demonstration projects and the deployment of prototypes. It does not support basic research or marketing projects. ICAT is not a small business-assistance program; the size of the applicant is not considered. (However, each grantee must be financially capable of supporting its project and commercializing its innovation.)

This year, ICAT is focusing solely on new technologies for measuring air pollution in the ambient air or indoor air. ICAT will consider only low-cost, easily-operated air-monitoring technologies that are suitable for wide deployment. “Personal monitoring” technology (worn by the user) is not eligible.

Applications (full proposals) will be accepted *only* in response to invitations from ARB following reviews of pre-proposals received by September 17, 2002.

This document contains instructions for submitting ICAT grant full proposals. (The necessary forms are in a separate downloadable document.) Part 1 is an overview of the ICAT program and of eligibility. Part 2 contains instructions for preparing a full proposal. Part 3 discusses the handling of confidential information that may be in an ICAT proposal. Part 4 explains how ARB will evaluate proposals. Part 5 describes the management of grants. Various appendices and forms are under separate covers.

The ARB will accept only full proposals received by 4 PM, PST, November 7, 2002. *A proposal must follow the instructions in Part 2* (which differ from those in previous years) to ensure its consideration.

Each proposal will be reviewed for the merits of the technology and the proposed project, the resources and financial capability of the applicant, and the business plan. ARB staff will select the best-qualified projects for grants.

The ARB staff's grant recommendations must be formally approved by the Air Resources Board (governing board) and by staff of the Energy Commission. The available money may not suffice to fund all the qualifying proposals. Not all available money will be granted if the ARB and CEC do not receive sufficient proposals that they deem meritorious according to the standards set forth in this document.

Part 1 -- OVERVIEW OF ICAT AND ELIGIBILITY

Eligible Technologies

This year's ICAT program will consider only technologies that have potentials for wide deployment to measure peoples' exposure to air pollutants during their daily activities. ARB is seeking technologies to provide measurements on a continuous or frequently integrated basis. (See Part 4 for more detail.) We are *not* seeking "personal monitoring" devices (worn on the person).

The characteristics that will allow wide deployment include:

- low acquisition cost
- low operating cost (including maintenance requirements)
- minimal need for laboratory analyses and off-site preparations
- portability (related to size, weight, ruggedness, and utility requirements)
- simplicity of calibration and other quality-control procedures

Other important characteristics are:

- the species measured; ARB is primarily concerned with particulate matter, NO_x, ozone, and certain Toxic Air Contaminants: hexavalent chromium, diesel PM, dioxins, PAH's, methylene chloride, perchlorethylene, p-dichlorobenzene, 1,3-butadiene, acetaldehyde, formaldehyde, acrolein, and C₆-C₉ aromatic hydrocarbons.
- adequate range of measurement, especially limit of detection (LOD)
- good accuracy and precision
- chemical and physical specificity in measurement (e.g., NO vs. NO_x and PM₁₀ vs. total PM)
- absence of artifacts and interferences in measurement

To receive a grant, a technology must have a clear potential for commercialization. As a corollary, it must have reasonable economics. Although ARB is willing to consider and support technologies that are not yet in commercializable forms, the technology must be defined well enough for its costs of acquisition and operation to be estimated with reasonable confidence.

The technology must be distinguishable from commercially available technology that is already applied to ambient air monitoring.

Eligible Projects

An applicant must propose a project that will move its technology substantially toward commercial application. *All other factors being constant*, the closer a technology is to being market-ready at the end of an ICAT project, the higher the proposal will be scored.

ICAT has generally required a project to culminate in a practical demonstration--usually a field trial--of its technology because that, presumably, is a necessary last step before commercialization. However, ARB recognizes that promising air monitoring technologies may yet be early in their development and that the support being offered by ICAT may not be enough to complete all the steps needed to reach market-readiness. Therefore, the lack of a field trial in a project proposal will *not* be a critical weakness. Such a lack, if based on practical necessity within the constraints of the program, can be offset by other desirable factors in a proposal.

A project must be proposed in specific terms, including explicit technical goals, definition of scope, and activities and methods to achieve the goals. Since the project is what ARB “buys” with ICAT funds, the importance and scope of the project must be clear to ARB’s reviewers.

Level of Funding

ARB seeks to spend ICAT funds cost-effectively, obtaining the best potential benefit from each dollar spent. We will consider requests up to \$1 million. However, since our nominal *total* program budget is \$1 million, a proposal must be superior to all other competing proposals to be granted that amount. Given equal technical merits, we would favor a request for a lesser amount over a request for \$1 million because the lesser grant would leave funds available for other worthwhile projects.

ICAT can pay for the *materials and construction* of the equipment needed for a demonstration. It cannot pay for purchasing equipment (finished durable goods).*

Required Matching Funds

The ICAT program will fund no more than 50 percent of any project’s total budgeted cost. All other budgeted costs and *all cost overruns* must be met with funds or services secured by the grantee. *An applicant must commit to support a minimum of 10 percent of the total budget with its own resources.* There must be commitments by partners of cash, equipment, or in-kind services (services to be provided to the project without compensation) to cover any remainder of the budget.

* ICAT can pay for equipment if the grantee is a public agency in California. However, to be a grantee, a public agency must have a business relationship with an entity that can commercialize the technology.

An applicant and its partners must demonstrate technical and fiscal resources sufficient to complete the proposed project.

Commercialization

Either the applicant or its business associates must be legally able to commercialize the technology and must have experience in commercialization.

Applicants are required to describe the commercial potential of their technologies and characterize the effort needed to bring the technologies to market. (See “Commercial Potential/Business Plan” in Part 2.) We recognize that for technologies that are not yet near commercial forms, these descriptions may necessarily be vague. In such a case, an applicant will not be penalized for incomplete information. (However, as stated in “Eligible Technologies”, above, we *will* favor technologies that are in commercializable forms.)

Proprietary Information and Intellectual Property

ARB can keep confidential certain types of information provided in proposals or developed in ICAT projects. (See Part 3 about our procedures for handling trade secrets.)

ARB relinquishes all rights to technologies developed in ICAT projects. (However, information developed in a project must be reported, as described in Part 5.)

2003 ICAT Program Schedule

Pre-proposals received by ARB	September 17 (2002)
Invitations of full proposals	October 11
Full proposals received by ARB	November 7
Identification of intended grantees	February (2003)
Board’s approval of awards	April (tentative)
Project period	≤24 months

Part 2 -- PROPOSAL INSTRUCTIONS

General Instructions

*It is essential that your proposal provide information that satisfies the requirements stated in this Part in underlined type. Especially important guidance on the required information is given in *italic* type. For further guidance, you should also read Part 4 on selection criteria.*

ARB may seek additional information from applicants. However, if we do not request such information or it is not provided by a deadline stated in a request, we will judge the merit of a proposal solely on the basis of the information in the original submittal.

Please enclose any documents (or pertinent excerpts or web urls) that you cite in support of performance claims in your proposal. However, do not include materials that are not needed to supply the information requested in these instructions. We do not need patent documents, complex engineering drawings and specifications, or promotional materials.

Submittal

Please provide 15 copies of your proposal without confidential information. If you wish to submit confidential information, you must separate it from the other elements of proposal, label it as confidential, and send it in five sequentially numbered copies. *ARB will not be responsible for protecting information that is not clearly labeled "confidential".* Also, sign and include Form 6 in your proposal if you send confidential information. *Any information labeled "confidential" will **not** be reviewed if Form 6 is missing.*

Full proposals must be received in printed form by 4 PM, PST, November 7, 2002, at:

ICAT Proposal for 2003
California Air Resources Board
Research Division, Ste. 540
1001 I Street
Sacramento, CA 95814

Content and Organization

A proposal consists of both narrative sections and forms. *They should be arranged in the following order.*

- Title page
- Table of Content
- Statement of Intent & Abstract (Form 1)
- Proposed Air Monitoring Technology

- Commercialization/Business Plan
- Project Proposal
- Budget (Form 3)
- Project Contributions & Level of Effort (Form 4)
- Project Schedule
- Project Team, Qualifications, and Resources
- Applicant's Financial Status (including Form 2)
- Confidentiality Form (if needed, Form 6)
- Commitments by Partners

The blank forms are under a separate cover. The remaining sections of this part provide guidance on the narrative sections.

Title Page

The title page should show the project's title and identify the applicant (company), the lead person, any partners, and the project site. Partners are persons or organizations that will contribute resources to the project (cash or in-kind services). We appreciate titles no longer than one line.

Statement of Intent & Abstract (Form 1)

For the applicant's e-mail address (item 4), *provide an address that you will monitor regularly*. Certain critical communications from ICAT will be sent by e-mail.

The abstract (item 10) should *briefly* summarize, in lay terms, the narrative sections of the proposal. *The abstract will not be evaluated by reviewers*. It should not include information that is not in the rest of the proposal. Please do not include graphics.

Please attach your (unsigned) Form 1 to an e-mail to icat@arb.ca.gov and include it (signed) in the printed proposal. The file must be viewable with MS Word 97[®].

Proposed Air Monitoring Technology

This section of the proposal must describe the air monitoring technology and how it works and discuss its attributes in the following areas. (See Part 4 for guidance on what ARB is seeking with respect to the attributes.)

- cost of acquisition
- operating cost (for materials, labor, maintenance, laboratory support)
- frequency of sampling and reporting
- need for laboratory preparations or analyses

- portability (size, weight, ruggedness, utility requirements)
- species measured
- range, accuracy, and precision of measurements (including, for criteria pollutants, ability to mimic Federal Reference Methods)
- complexity of calibration and other quality-control procedures

The proposal should discuss the attributes in the context of a proposed application of the technology. The acceptability of some parametric values depends on how the technology would be used. For example: an instrument with size, weight, and sound suitable for a school yard could be unacceptable in a house.

This section should *present evidence that the technology will perform as intended*. The section should clearly show the relationship of the system to be developed and/or tested in the ICAT project to any system or components whose performance has been documented.

If there is a Federal Reference Method for the pollutant or another widely recognized measurement method, the section should compare the output of the proposed monitoring technology to that of the other method.

Commercial Potential/Business Plan

The applicant or its commercialization partner may provide an existing business plan to serve as this section as long as the submittal addresses the following topics.

1. About the Company (or commercial partner, if applicable)
 - Business description -- type of company.
 - Summarize experience in bringing products to market.
2. Product
 - Technical highlights of the innovative technology.
 - Is the technology new or is it the next generation of an existing product? Are there any patents, copyright or other elements unique to the innovation?
 - Describe any applications other than the one that would be demonstrated in the ICAT project.
3. Market Analysis
 - Define your target market(s). Both markets within and outside of California should be considered
 - Identify the specific market niche for the proposed technology. Describe its size

and potential for growth.

- Describe any specific barriers to entry or expansion.

4. Competition

- Identify the primary competitors.
- How do their technologies differ from the innovative technology? Why is the new technology better?
- Compare costs between the innovative technology and competing technologies. Does the innovative technology have a competitive advantage in capital or life-cycle cost?
- Provide a cash flow analysis to show the projected return on investment (ROI) and payback period of the proposed technology. The analysis should include all relevant costs and assumptions.

5. Financial Projections

- Estimate the amount of capital needed to take the product to market. Identify the stages of funding requirements.
- Show the sources of funding (internal and/or external sources).
- Provide pro-forma income projections (profit & loss statements & cash flow). Include three-year projections and break-even analysis.
- State the assumptions upon which the projections are based.

6. Key Players

- Describe business alliances and partnerships that will be involved in commercialization.
- Describe the role of each entity. Provide documentation of interest or intent to participate in production, financing, marketing, or other development.

Proposed Project

This section must propose a specific ICAT project. An ICAT project consists of a set of tasks that are all necessary to take the technology from its current status substantially toward, if not to, a form that is commercially usable. ICAT will not co-fund tasks that are not on such a path, nor are the costs of such tasks allowed as part of the total project cost of which ICAT will pay half.

State specific technical goals for the project and methods to achieve them. Explain the importance of these goals to (eventually) commercializing the technology. Identify the steps to be accomplished and the means of accomplishing them.

Lay out specific tasks in enough detail for reviewers to understand the nature and scope of the work and for a grant agreement to set forth identifiable milestones of progress. (Completed milestones are invoicing points for grant payments.) Indicate which tasks are to be funded by ICAT. Indicate who (applicant, subcontractor, or in-kind partner) will perform each task.

Budget (Form 3)

The applicant and each subcontractor who will provide services worth over \$50,000 or over 25% of the total project budget must separately complete Form 3. (Only the applicant should submit the “Budget Submittal Document”.)

The contributions by a partner may be in-kind. If so, Form 5 must be completed.

Form 3 includes detailed instructions. Note that *the requested ICAT funds cannot exceed half of the total project cost and that the matching support from the applicant’s own resources must equal at least 10% of the total project cost*. Also, regardless of which tasks ICAT will fund, *the total amount of ICAT funds disbursed at any time cannot exceed the amount of co-funding expended by that time*.

The costs of these activities are *not* eligible for ICAT funding and cannot be part of the project for which ICAT will pay half:

- building, repairing, or remodeling permanent structures
- general company operations
- legal work
- basic research
- feasibility studies, market research, financial analysis, paper studies, liability analyses, patent analyses
- commercialization, full-scale production, deficit financing, or marketing
- contingencies
- profits for applicant or partners

In the budget, allow for travel to the ARB in Sacramento, California, for a meetings at the beginning and end of the project. International travel cannot be funded by ICAT.

Project Contributions and Level of Effort

Include Form 4 in your proposal. If a grant is made, the values for “ICAT” in the “Contributions” table will be the maximum allowable payments.

A “partner” is any entity who will contribute resources to the project without compensation. An entity that will be compensated is a subcontractor, not a partner.

Project Schedule

Provide a graphic display (e.g., time line or Gantt chart) of measurable benchmarks for all project tasks and the corresponding completion dates. The schedule should show months from the project’s initiation rather than actual dates.

Project Team, Qualifications, and Resources

Present the qualifications of the project team to conduct the proposed work. Provide brief resumes of all key individuals, with emphasis on experience with the ICAT technology and the kind of work involved in the project.

Present the personnel structure of the project, identifying individuals and *their roles in the project*.

Describe the technical resources of the applicant and subcontractors.

Financial Status of Applicant and Project Partners

The proposal must give evidence that the applicant and its major partners will each be financially capable of providing the project support indicated on Form 4.

For (i) the applicant and (ii) each project partner who will provide more than 25% of the non-ICAT funding or more than \$50,000 (either cash or in-kind service), the minimum data requirements are:

- Provide Form 2, Company Statistical Information (not required of public agencies).
- Describe the company’s operations and types of products (not required of public agencies).
- Describe the company’s prior investments directly related to the project.
- Describe any legal relationships between the applicant and its project partners.
- Provide copies of any currently filed Articles of Incorporation or Partnership Agreement and Fictitious Name Statement.
- Provide the previous two year-end financial statements, including income statements, balance sheets, and cash flow statements. Individuals may provide personal financial statements.

In lieu of financial statements, you may provide your most recent two years of federal tax returns. Public-sector applicants may attach copies of audited financial statements or the applicable portions of approved agency budgets showing funds to pay costs assigned in Form 4.

You may also provide any other useful documentation of financial capability. For R&D companies that have minimal revenues and small liquid assets, *it is advisable to provide a record of investments in the company and commitments for future investments.*

Financial statements should be prepared in accordance with generally accepted accounting principles, including all necessary explanatory notes. The financial statements may be audited, reviewed, or prepared by a certified public accountant. We prefer audited financial statements because they carry the greatest credibility.

Commitments by Partners

At this time, you *may* attach letters of support from potential customers and other entities and letters of commitment from project partners. (The commitments of partners will be *required* before your project is proposed to our Board.)

Part 3 -- CONFIDENTIAL INFORMATION

How ARB Handles Confidential Information

We prefer that you do not include confidential information (trade secrets) in your ICAT proposal. However, if you find it necessary to include such information, we will protect it as confidential information to the degree allowed by the ARB regulations on information disclosure (Appendix III), in conformance with State law. The ARB will not disclose data identified by an applicant as confidential, except as required by law. However, because of the legal requirements for disclosure of some kinds of information, applicants are advised that the ARB cannot provide an absolute guarantee that all material designated as confidential will not be disclosed to the public. Also, the State cannot accept legal liability for such disclosure.

All proposals are reviewed by reviewers outside the ARB as well as by ARB staff. These reviewers are from public universities in California and other government agencies, all of which can protect confidential information and have confidentiality agreements with ARB.

To recommend a proposal to the Board, at a public meeting, the ARB staff must describe in basic terms the technology and its proposed use. Therefore, *ARB cannot accept a proposal for which confidentiality is requested in entirety or in which the basic nature of the technology is confidential.*

Description of Confidential Information

ARB protects confidential information according to the California Code of Regulations, Title 17, Section 91000 et seq., Disclosure of Public Records. We will regard information as confidential if it fits one of the following descriptions.

- Technical data: recorded information, regardless of form or characteristic, of a scientific or technical nature. The data may be graphic or pictorial information in media such as drawings or photographs, test specifications or related performance or design type documents or computer software. Computer software may include computer programs, data bases and documentation. Further examples of technical data include research and engineering data, engineering drawings and associated lists, specifications, engineering calculations, standards, process sheets, manuals, technical reports, catalog item identification, and related information. However, Government Code Section 6254.7 states that all information, analyses, plans or specifications that disclose the nature, extent, quantity, or degree of air contaminants or other pollution which any article, machine, equipment, or other contrivance will produce, which any state or local agency requires the applicant to provide before the applicant builds, erects, alters, replaces, operates, sells, rents, or uses such article, etc., are public records. All air monitoring and emission data are public records.

- Trade secret: any formula, plan, pattern, process, tool, mechanism, compound, procedure, production data, or compilation of information which is not patented and which is known only to certain individuals with a commercial concern who are using it to fabricate, produce, or compound an article of trade or a service having commercial value and which gives its user an opportunity to obtain a business advantage over competitors who do not know or use it.
- Information developed for the Commercialization Plan
- Any information that is “patent pending”

If you request confidential treatment of information of the types described above and there is a third-party request for its disclosure, you must show that the information was under your control prior to the commencement of the proposed ICAT project. Also, it must have been produced by you (or by your contractor at your expense), and it must be reasonably demonstrated as confidential by reason of copyright, patent, or the trade-secret doctrines in effect at the time of its provision to ARB.

The ARB *will not protect* the following types of information as confidential:

- ICAT budget information
- names of your proposed subcontractors and matching-fund participants
- approved patents
- emission data

Requesting Confidentiality

To ensure protection, any information claimed to be a trade secret or otherwise exempt from disclosure under the Public Records Act (see Appendix III) or other provisions of law must be labeled "confidential".

Do not include any confidential information in the main proposal; all confidential information must be submitted in a *separate* document. Also, it must be accompanied by a signed Form 6. In the proposal, at the point where the information would appear if it were not confidential, please indicate its existence under the separate cover .

Please provide the name, address, and telephone number of the individual to be contacted if we receive a request for disclosure of the information claimed as confidential.

Part 4 -- SELECTION CRITERIA

The staffs of ARB and of the California Energy Commission will evaluate proposals for technical merit, qualifications of personnel, commercialization potential/business plan, and financial capability. The agencies may seek advice from the New York State Energy Resources Development Authority.

First, we will screen all the proposals for responsiveness to these instructions and conformity to the eligibility standards. Applicants will be notified of missing or deficient elements, including (i) technical descriptions that are too vague or undeveloped to merit a technical review, (ii) inadequate evidence of financial capability for the proposed projects, and (iii) faulty budgets. We will allow an applicant *three weeks* to rectify *all* deficiencies, after which all proposals still deemed non-responsive or inadequate will be removed from further consideration.

We will then score and rank each remaining proposal on *technical* merit (including its current state of development), *the importance and quality of the proposed project*, *the size of the requested grant*, and *the commercial potential for the technology* (taking into account the stage of development). Grants will be recommended to our Board and management of the CEC according to the rank list and the available funds.

Evaluation of Financial Capability

The reviewers will judge whether or not the *submitted data* indicate that the applicant and its partners are able to provide the non-ICAT portions of the project funding.

Evaluation of Technical & Commercial Merit

Reviewers will consider how well each proposal displays the desired attributes stated in the following “bullets”. Essential attributes are in italic type. *A clear lack of an essential attribute will disqualify a proposal* regardless of its other attributes.

1. Proposed Air Monitoring Technology (40 points)

- *The principles of operation are clearly described.*
- *The technology can be deployed in the daily environment of urban residents* (e.g., in homes and yards, in schools, near freeways, in public buildings)
- *The technology measures particulate matter, NO_x, ozone, or these Toxic Air Contaminants:* hexavalent chromium, diesel PM, dioxins, PAH's, methylene chloride, perchlorethylene, p-dichlorobenzene, acetaldehyde, formaldehyde, 1,3-butadiene, acrolein, C₆-C₉ aromatic hydrocarbons, or phthalates .
- *The range of measurement, especially LOD, is appropriate for the proposed use.*

- *The acquisition cost is reasonable for the proposed use of the technology.*
- The technology is developed and *documented* to a degree that allows a reasonable assessment of its technical and commercial potentials. (That is: satisfaction of the criteria listed above can be assessed.)
- The operating cost (including power and maintenance) is reasonable.
- For particulate matter, the technology discriminates by size and chemical class.
- The technology provides accurate and precise measurements. (For a criteria pollutant, accuracy is relative to the Federal Reference Method for air monitoring. While the technology may not reproduce FRM results, the output should be relatable to results from the FRM or other recognized method.)
- The technology can store and report measurements for short integration or averaging intervals over an extended period.
- The technology does not require off-site pre-sampling preparations or post-sampling laboratory analyses.
- The technology is portable to a degree consistent with its proposed use (considering size, weight, ruggedness, and ancillary needs such as power).
- Calibration and other quality-control procedures are explained and simple.
- There are no artifacts or interferences in measurement.

2 Quality of the Project (40 points)

- *The project will accomplish significant and necessary steps* toward making the technology commercially ready.
- *There are specific technical goals* for the project and evidence that they are achievable.
- *Tasks are clearly defined* and needed to meet the goals.
- *The applicant and subcontractors have appropriate experience* and resources for the project.
- The output of the proposed method will be compared to the output of a recognized test method (such as an FRM, if that is available).
- The final task is a practical field demonstration.
- The requested ICAT funds are commensurate with the potential benefits of the project and affordable when the needs of other worthy projects are considered.
- There are no obvious obstacles to project completion.
- The project would occur in California, thus promoting ARB's oversight.

3. Commercial Potential; Business Plan (20 points)

- The proposed technology has lower costs than competing technologies.
- The applicant or its commercial partners have sufficient experience and resources to commercialize the technology.
- There are no regulatory or legal obstacles for application of the technology.
- The qualities of the technology, the target market, and the income potential indicate that commercialization should be economically viable.

Part 5 -- GRANT AWARDS AND PROJECT MONITORING

Details on many of the following topics are presented in Appendix I.

Award Provisions

The ARB staff's recommendations to fund an ICAT project must be approved by the ARB's governing board via a resolution that describes the work to be conducted during the project and establishes the associated budget. Those specifications are taken from this document, which becomes part of the grant document that is created after the Board's resolution. The ARB will require satisfactory performance of work as described in the Board's resolution.

Disbursements

Funds are paid out in response to disbursement requests from the grantee. (A disbursement request is analogous to an invoice under a contract.) Requests are accepted upon the *achievement of specified milestones* related to the tasks defined in the work (project) plan, not more frequently than once per month. ARB may withhold disbursements if we deem that progress is unsatisfactory.

Each request must itemize certain expenses incurred during the period, identifying both ICAT expenses and matching-fund expenses. Each item in a request must correspond to an item in the project budget.

During a project, the cumulative dispersed ICAT funds can never exceed the cumulative expended matching funds. There is a ten-percent withhold of each disbursement pending completion of the project and submittal of the final report.

Reporting

Disbursement requests must be accompanied by progress reports covering the periods to which the requests apply. Each progress report must contain:

- a summary of work completed since the last progress report, noting progress toward completion of tasks in the work plan
- a statement of work expected to be completed by the next progress report
- the actual cumulative cash flows (ICAT funds and other, separately) in the categories established by the project budget
- receipts or invoices for equipment and subcontractors' services

A final report is required at the end of the project. It must include:

- a short public summary, written for a college-educated lay audience, that briefly describes the ICAT technology and the goals, methods, and results of the project. This must be in an electronic form readable with MS Word 97®.
- a more detailed report, readable with MS Word 97®, that explains the function of the technology and supports the reported results in the context of the project's goals. Although not intended for general distribution, this report will not be held confidential; *therefore, it should not contain proprietary detail about the technology.* (See Appendix II regarding trade secrets.) The report need not include "raw" data developed in the project or analyses that are not germane to the goals that have been stated for the project in the grantee's proposal.
- an update of the commercialization plan (This can be kept confidential.)

Meetings

Before work begins, a meeting will be held between the grantee and the ARB project management staff. (If the project will occur in California, the preferred locale is at the project site.) The purpose of this meeting will be to discuss the project plan, details of task performance, the project schedule, any changes to the project team, and any issues that may need resolution before ICAT-funded work begins. Meetings to discuss progress will be held at least quarterly by telephone. A final meeting will be held in Sacramento at the conclusion of the project to review the results and discuss the status of commercialization plans. The grantee must present a seminar in Sacramento on the completed project.

Project Monitoring

Any change in budget allocations, re-definition of deliverables, or extension of the project schedule must be approved by the ARB project manager. The project manager may visit the site of the project to evaluate its progress. After the ICAT project, the ARB project manager may request information on the progress of the innovation toward commercialization.

The ARB will not request additions to the work to be done under the grant. We will not terminate a grant because of minor technical difficulties or minor under-accomplishment of stated project objectives. However, ARB reserves the right to terminate a grant if it is obvious that the objectives cannot be approached or that the grantee or its subcontractors cannot perform the required work.